

PATENT

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MS150900.12/MSFTP223WOUSC

**CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being submitted via the USPTO EFS Filing System on the date shown below to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Date: January 16, 2009

/Rebecca Stanford/  
Rebecca Stanford

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of:

Applicants: Eric J. Horvitz

Examiner: Peng Ke

Serial No: 09/881,502

Art Unit: 2174

Filing Date: June 14, 2001

Conf. No: 7769

Title: DISTRIBUTED OBJECT CLASSIFICATION

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**REQUEST FOR REFUND**

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Dear Sir:

Request is hereby made for a refund in the amount of \$416.00 charged to Deposit Account 50-1063 on December 5, 2009. The fee was for claims filed in excess of 20; however the Reply filed January 5, 2009 cancelled a total of 9 claims, keeping the total at 20 in all. Attached hereto is a copy of the response as filed. Therefore, we request return of the full amount of \$416.00.

Please credit the refund to Deposit Account No. 50-1063 [MSFTP223WOUSC].

Respectfully submitted,

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**REPLY TO OFFICE ACTION DATED SEPTEMBER 5, 2008**

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Dear Sir:

Favorable reconsideration of the above-identified patent application is respectfully requested in view of the following amendments and comments.

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

#### **Listing of Claims:**

1. (Currently Amended) A notification system, comprising:  
a monitor that monitors a state of a device likely available states of an entity, the monitor derives a context of a user from the state of the device and based at least in part on the context the monitor infers a likely available state of the user; and  
a bounding system that classifies a notification to the entity user with a predefined notification priority according to a predefined protocol and the likely available states, the bounding system facilitating deferral of the notification based at least in part on the notification classification priority and the likely available state of the user, the bounding system establishes a group of notifications associated with disparate likely first and second available states priorities and forwards the group of notifications associated with the disparate likely available states to the user entity based on an occurrence of a highest likely state priority affiliated with at least one notification included in the group of notifications, content of the at least one notification included in the group of notifications is presented to the user entity in its entirety, content of notifications associated with lesser priorities likely states included in the group of notifications [[is]] are displayed for the entity user as a summary.
2. (Cancelled)
3. (Currently Amended) The system of claim [[2]] 1, wherein the predefined priority is assigned based upon the happening of a condition.
4. (Currently Amended) The system of claim [[2]]3, further comprising a subscription user interface to enable users to configure attributes of a notification, wherein the bounding system that classifies a notification with a predefined priority, classifies the notification with a predefined priority based at least in part on the attributes of the notification.

5. (Original) The system of claim 4, wherein the attributes are defined in a notification schema.
6. (Currently Amended) The system of claim 5, the notification schema further comprising at least one of a notification class, a source, a source assigned priority, a sender, a target, one or more content components, a relevant context, ~~and~~ or advanced attributes.
7. (Original) The system of claim 5, further comprising a preferences profile for assigning priority based upon settings in the notification schema.
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Currently Amended) The system of claim 1, wherein the monitor derives the context based at least in part from at least one of a calendar[[,]] or a time of day, ~~a device activity, and a user location.~~
14. (Cancelled)
15. (Currently amended) The system of claim 1, wherein the context ~~is likely available states are determined from~~ includes at least one of ~~an indication by the user,~~ an office setting, an environment setting, an activity setting, ~~and~~ or a driving setting.

16. (Currently Amended) The system of claim 1, further comprising a notification agent that directs notifications from one or more sources to one or more notification sinks based at least in part on the predefined protocol and the likely available state[[s]].
17. (Cancelled)
18. (Cancelled)
19. (Currently Amended) The system of claim 1, further comprising a max deferral setting that is associated with a notification priority to enable at least one of a delivery of the notification at a time-out of the max deferral, and deferral of the notification to the likely available ~~free~~ state being free.
20. (Original) The system of claim 19, further comprising a setting to enable designated notifications to at least one of be passed-through, and restricted during designated periods.
21. (New) A method comprising:
- monitoring a state of a device;
  - deriving a context of a user from the state of the device;
  - inferring a likely available state of the user from the context;
  - classifying a first notification based on a predefined notification classification as a first classification;
  - deferring the first notification directed to the user based on the first classification and the likely available state of the user;
  - classifying a second notification based on the predefined notification classification as a second classification, the second classification being different from the first classification;
  - deferring the second notification directed to the user based on the second classification and the likely available state of the user;
  - establishing a group of notifications including the first and second notifications;
  - determining that the second notification should be forwarded to the user;

forwarding the group of notifications to the user based at least in part on determining that the second notification should be forwarded;  
presenting a content of the second notification included in the group of notifications to the user in its entirety; and  
presenting a content of the first notification as a summary.

22. (New) The method of claim 21, wherein classifying the first notification includes classifying the first notification based at least in part on a source of the first notification, a source assigned priority of the first notification, one or more content components of the first notification, of a relevant context of the first priority.
23. (New) The method of claim 22, further comprising receiving input from the user through a subscription user interface to configure attributes of a notification to be considered in the predefined notification classification.
24. (New) The method of claim 21, wherein monitoring a state of a device includes monitoring at least one of a calendar, a time of day, a device activity, or a user location.
25. (New) The method of claim 21, wherein determining that the second notification should be forwarded to the user includes determining an age of the second notification as exceeding a second max deferral setting that is associated with the second classification.
26. (New) The method of claim 25, wherein presenting a content of the first notification as a summary is based at least in part on the first classification and a determination that an age of the first notification does not exceed a first max deferral setting that is associated with the first classification, the first max deferral setting being longer than the second max deferral setting.
27. (New) The method of claim 21, further comprising displaying to the user a list of possible states of the device that could be monitored, the list including a length of pauses in typing, actions in an application, and a length of pauses after actions in an application.

28. (New) The method of claim 27, further comprising receiving from the user a context associated with selected possible states of the device that could be monitored.

**REMARKS**

Claims 1-20 are currently pending in the subject application and are presently under consideration. Claims 1, 3, 4, 6, 13, 15, 16, and 19 have been amended in light of the cited documents, claims 2, 8-12, 14, 17, and 18 have been cancelled without prejudice or disclaimer, and claims 21-28 have been added. A version of all pending claims is presented on pages 2-6 of this Reply. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claims 1-20 Under 35 U.S.C. §103(a)**

Claims 1-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Aravamudan *et al.* (US 6,301,609) in view of Stimmel (US 6,678,719). This rejection should be withdrawn for at least the following reasons. Aravamudan *et al.* and Stimmel, alone or in combination, do not teach or suggest each and every feature set forth in the subject claims.

[T]he prior art reference (or references when combined) must teach or suggest all claim limitations. See MPEP §706.02(j). See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). [W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious. See *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727 (2007) citing *United States v. Adams*, 383 U. S. 39, 51-52 (1966). A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727 (2007) citing *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1, 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into the use of hindsight" (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 (CA6 1964))).

Applicant's specification relates to reducing disruptiveness of notifications from various communications modalities *via* bounded deferral policies associated with a notification platform architecture. More particularly, the specification describes systems and/or methods for reducing the disruption costs associated with notifying a user of messages and/or alerts wherein losses associated with a deferred transmission of information contained in notifications can be bounded.



To this end, independent claim 1 as amended recites: *a monitor that monitors a state of a device, the monitor derives a context of a user from the state of the device and based at least in part on the context the monitor infers a likely available state of the user.* The primary and secondary documents fail to teach or suggest these aspects of the subject matter as claimed.

Aravamudan *et al.* provides a unified messaging solution and services platform that queries a user for a proposed message disposition is the user is on line, and if the user is off line, then the CSP holds the message an abeyance until the user is again on-line and initiates an instant message to the user only when the status of the user is once again registered as online. (Aravamudan *et al.*, Col. 9, lines 1-9).<sup>\*</sup> Aravamudan *et al.* also describes monitoring a state of a device, i.e., keyboard typing or motion detector, to determine presence. (Aravamudan, *et al.*, Col. 7, lines 49-55). However, such device monitoring is used to locate the user's active device to send them an instant message to determine where the user wants the important event to be delivered. (Aravamudan *et al.*, col. 8, line 62 – Col. 9, line 3). Aravamudan *et al.* however does not disclose the derivation of a context of a user from the state of the device and based at least in part on the context the monitor inferring a likely available state of the user from the derived context of the user. Nowhere in the cited document are such features taught let alone suggested.

Aravamudan *et al.* does not teach or suggest a monitor that monitors a state of a device, the monitor derives a context of a user from the state of the device and based at least in part on the context the monitor infers a likely available state of the user as recited in claim 1. Rather, Aravamudan *et al.* monitors a user's device for mere presence, but does not derive a context of a user from the state of the device, nor does Aravamudan *et al.* infer a likely available state based at least in part on the context.

Stimmel does not remedy this defect in Aravamudan *et al.* Stimmel provides a system and method for enabling a user to determine the status of other users and to identify communications procedures for contacting the other users based on the status of the other users. The system disclosed by Stimmel includes a plurality of communications devices each associated with a user where each of the communications devices is operable for the associated user to self assign a user status and communications procedures for contacting the associated user as a function of the user status and displaying the user status of the other users. The secondary document however does not disclose the derivation of a context of a user from the state of the

device and based at least in part on the context the monitor inferring a likely available state of the user from the derived context of the user.

Claim 1 has been amended to also recite a bounding system that classifies a notification to the user with a predefined notification priority, the bounding system facilitating deferral of the notification based at least in part on the notification priority and the likely available state of the user, the bounding system establishes a group of notifications associated with first and second priorities and forwards the group of notifications to the user based on an occurrence of a highest priority affiliated with at least one notification included in the group of notifications, content of the at least one notification included in the group of notifications is presented to the user in its entirety, content of notifications associated with lesser priorities included in the group of notifications are displayed for the user as a summary. Aravamudan *et al.* and Stimmel, alone or in combination do not teach or suggest this feature of claim 1.

As noted above, neither Aravamudan *et al.* nor Stimmel teach or suggest inferring a likely state of the user from the derived context of the user, and thus, cannot teach or suggest deferring the notification based at least in part on the notification priority and the likely available state of the user. Moreover, Aravamudan *et al.* only defers sending an instant message to the user when the user returns online to determine a disposition of the deferred message. This does not teach or suggest the features of claim 1 of establishing a group of notifications and forwarding the group of notifications based on an occurrence of a highest priority affiliated with at least one notification, much less, content of the at least one notification included in the group of notifications being presented to the user in its entirety and content of notifications associated with lesser priorities displayed as a summary.

Stimmel again does not cure this defect in Aravamudan *et al.* Stimmel allows a user to self assign a status and list communication methods that can be used to contact the user with that status. (Stimmel, Col. 3, lines 53-61). Self assigned status with associated preferred communication methods does not teach or suggest the above-features of claim 1. Rather, the self assigned status and associated preferred communication methods of Stimmel teach away from deferring a notification, since Stimmel's user status information is to provide a user wishing to reach another user a means to reach them.

Additionally, amended claim 13 that now directly depends from independent claim 1 recites *wherein the monitor derives the context based at least in part from at least one of a*

*calendar or a time of day.* For at least the reasons stated above, Aravamudan *et al.* and Stimmel do not teach or suggest these features, and more particularly, do not teach or suggest utilizing context based on either calendar information or time of day indications.

Further dependent claim 15, as amended, that depends directly from independent claim 1 recites *wherein the context includes at least one of an office setting, an environment setting, an activity setting, or a driving setting.* Once again the primary and secondary documents do not teach or suggest this element as set forth in the subject claim. In fact, neither the primary nor the secondary document contemplate determining a context from a state of the device, much less, determining a context as an office setting, an environment setting, an activity setting, or a driving setting.

In view of at least the foregoing, it is submitted that Aravamudan *et al.* and Stimmel, either alone or in combination, do not disclose, teach, or suggest each and every feature recited by independent claim 1 (and claims that depend there from). Accordingly, applicants respectfully request that this rejection should be withdrawn and the claims allowed.

Applicant also submits new independent claim 21 distinguishes the cited art of record. For example, claim 21 recites monitoring a state of a device, deriving a context of a user from the state of the device, and inferring a likely available state of the user from the context. As noted above with respect to claim 1, neither Aravamudan *et al.* nor Stimmel, either alone or in combination, disclose, teach, or suggest this feature. Moreover, claim 21 also recites deferring the first notification directed to the user based on the first classification and the likely available state of the user. As noted above with respect to claim 1, Aravamudan *et al.* defers sending an instant message regarding where to distribute a message to when a user is online, but this does not teach or suggest the features of claim 21. Similarly, Stimmel does not defer a notification, but rather provides a system for not deferring a message by allowing a user to determine preferred communication methods.

Claim 21 also recites forwarding the group of notifications to the user based at least in part on determining that the second notification should be forwarded, presenting a content of the second notification included in the group of notification to the user in its entirety, and presenting a content of the first notification as a summary. Aravamudan *et al.* and Stimmel do not teach or suggest forwarding any group of notifications. In both references, each notification is sent separately. Even if the references taught a grouping of notifications, neither reference teaches or

suggests presenting the content of the notifications differently, much less in the manner recited in claim 21.

Accordingly, applicant respectfully requests that claim 21 is allowable. Dependent claims 22-28 depend from claim 21 and are allowable for at least the foregoing reasons.

#### CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP223WOUSC].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

AMIN, TUROCY & CALVIN, LLP

/Himanshu S. Amin/

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